Form 82, H.

TYPHOID FEVER IN 1885.

PRELIMINARY REPORT.

Department of Health,

MUNICIPAL DEPARTMENT BUILDING,

BROOKLYN, N. Y., January 1, 1886.

To the Physicians of Brooklyn:

The following is a preliminary report only. A complete summary is being prepared of the cases reported during the year 1885; together with the history of each case, so far as it could be ascertained, and of the plumbing of 1400 houses in the districts specially affected, including that of every house in which the disease occurred:

From the examination made by this Department into the subject of typhoid fever, the following facts are deduced and recommendations made:

First—That typhoid fever is a disease which prevails more in the Autumn than at other seasons of the year, and that Autumns in which the temperature is high are more favorable for its development and spread than those in which the mercury is near the freezing point; and that the Autumn of 1885 has been one of high temperature.

Second—That typhoid fever exists in this city, as it does in almost every city, town and village throughout this country and Europe.

Third—That it has existed to a greater or less extent in this city since the year 1848, the date of the first records of mortality.

Fourth—That no record worthy of the name has ever been made of the number of cases of this disease which have occured in Brooklyn, and therefore no comparison, based on cases, can be made as to its prevalence throughout the city, or any portion thereof, for different years.

Fifth—That the only figures which are available for purposes of comparison are the certificates of death which are filed by attending physicians; and that, as typhoid fever is a disease which does not vary greatly as to its mortality in different years, the record of deaths may be regarded as a fair indication of its prevalence.

Sixth—That a study of this record of deaths, as given in the subjoined table, demonstrates that in the following years the disease was more prevalent than during 1885: viz., 1848, 1849, 1851, 1852, 1854, 1859, 1860, 1861, 1862, 1863, 1864, 1865, 1866, 1867, 1868, 1869, 1870, 1872 and 1873, and that it was less prevalent in the years 1874, 1875, 1876, 1877, 1878, 1879, 1880, 1881, 1882, 1883 and 1884.

Seventh—That during the year 1885 the disease has been more prevalent in two sections of the city than elsewhere, and that both of these sections are upon comparatively high ground.

Eighth—That the Ridgewood water supply is in nowise connected with the origin or spread of typhoid fever in Brooklyn.

Ninth—That the disease is not due in Brooklyn to decayed vegetation, nor to wooden pavements, nor is it, except in an extremely small number of cases, traceable to milk.

Tenth—That in some instances persons have contracted the disease out of the city, and have returned to the city either sick or with the disease in their systems, which has subsequently developed; that in other instances the disease has undoubtedly originated in the city.

Eleventh—That the germ or infectious element is contained in the discharges of the patients.

Twelfth—That a thorough disinfection of these discharges has never been practiced, but they have in an infected condition been thrown into the sewer-pipes of the house from which the infectious element has been given off, and have in this way communicated the disease to other members of the same household.

Thirteenth—That passing from the house-pipes into the public sewers in an infected condition, these discharges have contaminated the sewers, and the sewer air, tending always toward high levels and finding a ready entrance into other houses, especially those in the immediate neighborhood, through defects in the plumbing, carries with it the infectious element, and thus the disease is conveyed to other households.

Fourteenth—That the neglect of complete and thorough disinfection of the discharges of the patients is the principal cause of the spread of typhoid fever, and that if this measure could be rigidly and conscientiously carried out, the disease would be reduced to cases which contract the disease outside the city, and those which contract it through infected milk, which latter number is so small as practically to be of no moment.

Fifteenth—That inasmuch as typhoid fever is a disease which does not early declare itself so as to justify a diagnosis of that disease; and inasmuch as it is considered probable by competent sanitary authorities that some forms of diarrhœa and dysentery are infectious and spread by means of the discharges of those attacked, it should be the practice of physicians to recommend, and of householders to enforce disinfection of the discharges of all persons suffering with diarrhœal affections.

Sixteenth—That for this disinfection only those materials should be employed which have met the tests of experts, such as chloride of lime and solution of chlorinated soda (see circular on "Restriction and Prevention of Contagious Diseases," pp. 6 and 7, issued by the Department), and that all preparations, which have not thus been found efficient, even though largely indorsed, should be discarded.

Seventeenth—That the plumbing of all houses throughout the city should be carefully examined, all defects remedied and the best means adopted for disconnecting the house-pipes from the street sewer, and for insuring a

complete circulation of fresh air through the sewer-, soil-, and waste-pipes of the houses.

Eighteenth—That experiments which have been recently conducted in disinfecting with chloride of lime the sewers in the streets where typhoid fever existed encourage the hope that good results may be obtained by the disinfection of sewers in districts in which infection exists, but that this can only be of value for a short time, and in conjunction with systematic disinfection of the discharges within the house.

Nineteenth—That the substitution of perforated for tight manhole-covers, which has been carried on by the city as rapidly as the money available for that purpose would admit, should be completed at the earliest possible moment, so that the public sewers will be thoroughly ventilated, and accumulations of sewer-air prevented. A special force should be constantly employed to keep the openings in these covers free from dirt, snow and ice, so that they may at all times be unobstructed.

Twentieth—That the house-to-house inspection which has been made in the two sections of the city already referred to should be continued, until the condition of the plumbing of every occupied dwelling in the city be ascertained and the defects remedied; and that in view of our own experience and that of the health officer of Detroit, Mich., disinfection of the public sewers should be continued in all sections of the city where contagious diseases prevail, until further experience shall demonstrate whether such disinfection is, or is not, efficacious.

The following table shows the deaths from typhoid fever from 1848 to 1885, with ratio per 1,000 of population:

YEAR.	Population.	Deaths from typhoid fever.	Ratio per 1000 of population.	YEAR.	Population.	Deaths from typhoid fever.	Ratio per 1000 of population.
1848.....	82,974	70	.843	1868.....	352,500	103	.292
1849.....	90,774	34	.375	1869.....	373,600	96	.257
1850.....	*98,574	20	.202	1870.....	*396,099	111	.279
1851.....	119,915	42	.350	1871.....	412,000	92	.223
1852.....	141,256	43	.304	1872.....	428,500	149	.347
1853.....	162,597	29	.178	1873.....	445,800	103	.231
1854.....	183,938	63	.340	1874.....	463,735	81	.175
1855.....	*205,280	30	.146	1875.....	*482,493	102	.211
1856.....	217,556	40	.186	1876.....	498,300	89	.179
1857.....	229,832	46	.200	1877.....	514,300	82	.160
1858.....	242,108	51	.211	1878.....	531,100	59	.111
1859.....	254,384	59	.232	1879.....	548,500	59	.110
1860.....	*266,661	85	.318	1880.....	*566,689	71	.125
1861.....	272,551	116	.425	1881.....	583,220	99	.170
1862.....	278,441	129	.464	1882.....	604,356	93	.154
1863.....	284,331	131	.461	1883.....	624,118	92	.147
1864.....	290,221	177	.610	1884.....	644,526	107	.166
1865.....	*296,112	250	.844	1885.....	665,602	150	.225
1866.....	313,800	207	.660	1885.....	700,000	150	.214
1867.....	330,600	111	.335	1885.....	725,000	150	.207

*Census years. For all other years the population is estimated. For 1885 the estimated population was 665,602; for 1886 it is estimated at 690,000; it is probably over 700,000.

Attention is called to the ordinance requiring reports of all contagious diseases, including *typhoid fever*, and physicians are requested to be, hereafter, as prompt and thorough in sending in their reports of this disease, as they have been hitherto in reporting scarlet fever, diphtheria, etc. :

"SEC. 123. That every physician shall report to the sanitary bureau, in writing, every person having a contagious disease (and the state of his or her disease, and his or her place of dwelling and name, if known), which such physician has prescribed for or attended for the first time since having a contagious disease, during any part of the preceding twenty-four hours.

"SEC. 5. * * * That the phrase 'contagious disease' shall be held to include all persons sick, affected or attacked by a disease of an infectious, contagious or pestilential nature (more especially, however, referring to the cholera, yellow-fever, small-pox, diphtheria, ship or typhus, typhoid, spotted, relapsing and scarlet fevers), and also including any new disease of an infectious, contagious or pestilential nature, and also any other disease publicly declared by this Board dangerous to the public health."

Respectfully,

J. H. RAYMOND, M. D.,

Commissioner of Health.